AMENDMENTS TO THE SPECIFICATION:

Page 1

Please substitute the following replacement paragraph for paragraph number 1:

This application is a divisional of U.S. Patent Application No.: 10/106,329, entitled "Systems and Methods for Implementing Receiver Transparent Q-Mode," filed March 27, 2002, now pending, which claims the benefit of and priority to U.S. Provisional Application Serial No. 60/278,936 filed March 27, 2001, entitled "Receiver Transparent Q-Mode," U.S. Provisional Application Serial No. 60/283,467 filed April 12, 2001, entitled "Receiver Transparent Q-Mode With On-Line Reconfiguration," U.S. Provisional Application Serial No. 60/287,968 filed May 1, 2001, entitled "Receiver Transparent Q-Mode With On-Line Reconfiguration And Scrambling," and U.S. Serial No. 60/293,034 filed May 23, 2001, entitled "Receiver Transparent Q-Mode With On-Line Reconfiguration And Scrambling And Q-Mode Symbol Distortion," all of which are incorporated herein by reference in their entirety.

Page 3

Please substitute the following replacement paragraph for paragraph number 17:

Fig. 4 is a block diagram illustrating an exemplary XOR scrambler according to this invention;

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Please substitute the following replacement paragraph for paragraph number 18:

Fig. 5 is a block diagram illustrating an exemplary transmitter having an XOR scrambler and phase rotator for a 64-QAM constellation;

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Please substitute the following replacement paragraph for paragraph number 21:

Fig. 8 is a flowchart illustrating an exemplary method of entering Q-mode according to this invention; and

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Please substitute the following replacement paragraph for paragraph number 22:

Fig. 9 is a flowchart illustrating an exemplary method of exiting Q-mode according to this invention.

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Please substitute the following replacement paragraph for paragraph number 28:

In operation, L bits are received from a transmission protocol specific-transmission convergence layer (not shown) and converted, with the cooperation of the serial to parallel converter 110, into w_N words. These w_N words are then processed by the XOR scrambler 120 and phase rotator ~~130~~ 140, which work in cooperation, to map and "all zeros" input word (w_i) of the i^{th} carrier to a point in a constellation defined by B_i,G_i that is closest to the 4-QAM Q-mode constellation point (Q_I) for that carrier. At the receiver, not illustrated, the inverse operations are performed.

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Please substitute the following replacement paragraph for paragraph number 56:

Multicarrier ADSL systems typically use a synchronous bit scrambler before modulation in order to assure that the data bits being transmitted are as random as possible, this is important to keep the Peak to Average Power ~~ration~~ ratio low in multicarrier modems. The XOR scrambler 120 as discussed herein however, does not provide this randomization function since it is primarily just mapping bits from one pattern to another. In order to support the exemplary bit scrambling functions according to this invention, one of the following exemplary embodiments can be implemented:

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Please substitute the following replacement paragraph for paragraph number 74:

Fig. 9 outlines an exemplary method of exiting Q-mode according to this invention. In particular, control begins in step S300 and continues to step S310. In step S310, a determination is made whether actual information bits are to be transmitted. If actual information bits are to be transmitted, control continues to step ~~S300~~ S330. Otherwise, control continues to step S320 where the transmitter remains Q-mode. Control then returns back to step S310.